

AOC-50 Closure Sampling Statistical Evaluation

Copper

Sample ID	Sample Type	Copper (mg/kg)
AOC50-BOT01	N1	24.13
AOC50-BOT01	FD1	14.5
AOC50-BOT02	N1	9.19
AOC50-BOT03	N1	13.81
AOC50-BOT05	N1	21.57
AOC50-BOT06	N1	10.98
AOC50-SW01	N1	7.19
AOC50-SW02	N1	6.89
AOC50-SW03	N1	11.39
AOC50-SW04	N1	14.55
AOC50-SW05	N1	16.15
AOC50-SW05	FD1	15.86
AOC50-SW11	N1	4.46
AOC50-SW12	N1	4.51
AOC50-SW13	N1	2.11

Summary Statistics for		Copper (mg/kg)	Summary Statistics for		In(Copper (mg/kg))
Number of Samples		13	Minimum		0.746687948
Minimum		2.11	Maximum		3.18345588
Maximum		24.13	Mean		2.233652817
Mean		11.30231	Standard Deviation		0.693237649
Median		10.98	Variance		0.480578438
Standard Deviation		6.637742	Shapiro-Wilk Test Statistic		0.956405273
Variance		44.05962	Shapiro-Wilk 5% Critical Value		0.866
Coefficient of Variation		0.587291	Data are Lognormal at 5% Significance Level		
Skewness		0.600047	Estimates Assuming Lognormal Distribution		
95 % UCL (Assuming Normal Data)			MLE Mean		11.86914335
Student's-t		14.58346	MLE Standard Deviation		9.323206221
95 % UCL (Adjusted for Skewness)			MLE Coefficient of Variation		0.785499505
Adjusted-CLT		14.65782	MLE Skewness		2.841159149
Modified-t		14.63452	MLE Median		9.333898911
95 % Non-parametric UCL			MLE 80% Quantile		16.76743531
CLT		14.33045	MLE 90% Quantile		22.74768078
Jackknife		14.58346	MLE 95% Quantile		29.19591348
Standard Bootstrap		14.21333	MLE 99% Quantile		46.81125144
Bootstrap-t		15.14199	MVU Estimate of Median		9.162733508
Chebyshev (Mean, Std)		19.32695	MVU Estimate of Mean		11.61233828
			MVU Estimate of Std. Dev.		8.485738751
			MVU Estimate of SE of Mean		2.334691419

Note: The samples highlighted in grey were not used in the UCL calculation. The highest value of the parent sample or the field duplicate sample was used for the UCL calculation.

The samples highlighted in yellow were the samples that exceeded the background concentration for copper.

UCL Assuming Lognormal Distribution	
95% H-UCL	19.06577048
95% Chebyshev (MVUE) UCL	21.78902224
99% Chebyshev (MVUE) UCL	34.84222459
Recommended UCL to use:	
H-UCL	

The values in bold are the values used for reporting the UCL.